

PATENT COOPERATION TREATY

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PCT

To:

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WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2005/008318

International filing date (day/month/year)
25.04.2005

Priority date (day/month/year)
28.04.2004

International Patent Classification (IPC) or both national classification and IPC
H04N5/76

Applicant
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1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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Name and mailing address of the ISA:



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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

10/580468
AP9 Rec'd PCT/PTO 25 MAY 2006
International Application No.
PCT/JP2005/008318

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/008318

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-18
	No: Claims	
Inventive step (IS)	Yes: Claims	1-18
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V.

1 Reference is made to the following documents:

D1 : US 2002/016970 A1 (NEGISHI SHINJI ET AL) 7 February 2002 (2002-02-07)

D2 : US 2002/191958 A1 (LIN SHU ET AL) 19 December 2002 (2002-12-19)

D3 : US 2002/018643 A1 (OKADA TOMOYUKI ET AL) 14 February 2002
(2002-02-14)

D4 : EP 1 326 443 A (KABUSHIKI KAISHA TOSHIBA) 9 July 2003 (2003-07-09)

2 INDEPENDENT CLAIM 1

2.1 Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parentheses applying to this document):

A stream generation apparatus (fig. 1, (1)) which generates a stream including encoded pictures and a command for managing a buffer ([0085]) which holds a decoded picture as a reference picture (fig. 5; [0083]), said apparatus comprising:

a generating unit operable to generate the stream including the encoded pictures (fig. 1, (20)).

From this, the subject-matter of independent **claim 1** differs in that:

- i) the command for managing a buffer which holds a decoded picture as a reference picture being added to one of the encoded pictures;
- ii) a judging unit operable to judge whether or not an encoded picture to which the command is added is to be skipped at the time of trick-play;

- iii) an adding unit operable to add repetition information indicating the same contents as the command to another encoded picture, in the case where an encoded picture is judged to be skipped at the time of trick-play, said added information indicating the same content as said command to the another encoded picture that follows in decoding order and that is not skipped at the time of the trick-play;

a generating unit operable to generate the stream including the encoded pictures and the command repetition information.

2.2 The subject-matter of **claim 1** is therefore novel (Article 33(2) PCT). The problem to be solved by the present invention may be regarded as "how to generate a stream of picture data and other data that allows trick-play operations when reproducing said picture data".

2.3 The solution to this problem proposed in **claim 1** of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

The skilled person, when faced with the problem stated at paragraph 2.1 above, would have not come to the present solution by using any combination of D1, D2, D3 and D4.

2.4 **Claims 2-8** are dependent on **claim 1** and as such also meet the requirements of the PCT with respect to novelty and inventive step.

3 INDEPENDENT CLAIM 9

Independent **claim 9** is a method claim corresponding to **claim 1**. Therefore the comments as put forward at paragraphs 2.1 to 2.3 apply, *mutatis mutandis*, to independent **method claim 9**.

4 INDEPENDENT CLAIM 10

- 4.1 Document D4, which is considered to represent the most relevant state of the art, discloses (the references in parentheses applying to this document):

A picture encoding apparatus ([0024]) comprising:

an encoding unit (fig. 3, (29)) operable to encode pictures;

From this, the subject-matter of independent **claim 10** differs in that:

a first adding unit operable to add a command, for managing a buffer which holds a decoded picture as a reference picture, to one of the coded pictures;

a judging unit operable to judge that whether or not the coded picture to which the command is added is to be skipped at the time of trick-play;

an adding unit operable to add repetition information indicating the same contents as the command to another encoded picture, in the case where an encoded picture is judged to be skipped at the time of trick-play, said added information indicating the same content as said command to the another encoded picture that follows in decoding order and that is not skipped at the time of the trick-play;

a generation unit operable to generate the stream including the coded pictures and the command repetition information.

- 4.2 The subject-matter of **claim 10** is therefore novel (Article 33(2) PCT). The problem to be solved by the present invention may be regarded as "how to encode picture data and other data that allows trick-play operations when reproducing said picture data".

- 4.3 The solution to this problem proposed in **claim 10** of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

The skilled person, when faced with the problem stated at paragraph 2.1 above, would have not come to the present solution by using any combination of D1, D2, D3 and D4.

5 INDEPENDENT CLAIMS 11 to 18

Independent **claims 11 to 18** are corresponding to **claims 1 and 10**. Therefore the comments as put forward at paragraphs 2.1 to 2.3 and 4.1 to 4.3 apply, *mutatis mutandis*, to independent **claims 11 to 18**.

Re Item VIII.

1 INDEPENDENT CLAIMS 1, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

- 1.1 The application does not meet the requirements of Article 6 PCT, because **claims 1 and 9 to 18** are not clear.

At lines 11-12 claim 1 defines: "indicating the same contents as the command to another coded picture". This definition is obscure. For further clarification see at the description the paragraph bridging pages 12-13.

At lines 13-14 claim 1 defines: "the coded picture judged to be skipped and that is not skipped". This definition is obscure. For further clarification see at the description the paragraph bridging pages 12-13.

The last line of claim 1 defines "the command and the repetition information". It would appear from the description that the repetition information indicates the same contents as the command, but to a different encoded picture (see description as filed at page 13, lines 29-31).

- 1.2 The same comments as put forward at paragraph 1.1 above apply, *mutatis mutandis*, to the corresponding method **claim 9**.
- 1.3 In addition to the comments as put forward at paragraph 1.1 above that apply, *mutatis mutandis*, to **claim 10**, at lines 16-17 claim 10 defines: "to one of the coded pictures that is used as a reference picture". This is not supported by the description. According to description as filed, at page 9, lines 30-32, reference pictures are decoded pictures waiting, in the Decoded Picture Buffer, to be displayed.

- 1.4 Claims 11 to 18 are corresponding to claims 1 and 10, and are therefore not clear for the reasons put forward at paragraphs 1.1 and 1.3 above.